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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
06/942,666	12/17/86	LIN	THE-204-PCT

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EXAMINER	
FELIX, J	
ART UNIT	PAPER NUMBER
122	8

DATE MAILED: 07/13/87

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☑ Notice of Art Cited by Applicant, PTO-1449
4. ☐ Notice of informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☑ Claims 1 - 10 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☑ Claims 1 - 10 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).

10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.

12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited in accordance with specific host set forth in the specification. See MPEP 706.03(n) and 706.03(z). The term "warm blooded animals" is too broad, because humans may be included. The method for treating warm blooded animals infected with a retrovirus lacks enablement in the specification. There are no in vivo experiments or clinical applications of the compound toward an animal infected with a retrovirus, therefore, basis for the claimed terminology is not sufficiently supported.

Claims 5-8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 appears to be a substantial duplication of claim 5, 6, 7 or 8. The said claims 5-9 are essentially the same, each represents a form of unit dosage. Claims 6 and 8 are exact duplicates. The term "medicament" in claim 9-10 should be changed to ----pharmaceutical compositions--- in order for consistency of terminology in the claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless-
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 5 and 9 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over Japanese patent '782. Japanese patent '782 discloses the applicants' claimed compound, 3'-deoxythymidin-2'-ene. An active ingredient of an old compound in association with a diluent or a carrier is not a patentable composition (see In re Rosicky 125 U.S.P.Q. 341 and . Ex parte Billman 71 U.S.P.Q. 253).

Claims 1-10 are rejected under 35 U.S.C. 103 as being unpatentable over Verheyden et al in view of Japanese patent '782. The Verheyden et al patent generically discloses antiviral activity of 2',3'-unsaturated nucleosides, which include 5-alkyl-3'-deoxyuridin-2'-ene (see the sugar formula I in column 2, line 20 and the base formula in column 2, line 35 in particular). The 5-alkyl can be 3-7 carbons. Applicants' 3'-deoxythymidin-2-'ene differs in that it is a 5-methyl homolog of 2',3'- unsaturated uridine nucleoside. However, the Verheyden et al patent teaches the equivalents of 5-lower alkyl of 2',3'-unsaturated cytindin-2'-ene nucleosides as antiviral agents as shown by the base cytidine formula in column 2, line 45 and line 64 in particular. Japanese patent '782 discloses 3'-deoxythymidin-2'-ene, the instant compound and its derivatives are useful for the preparation of uridine antibiotics. The selection of 3'-deoxythymidin-2'-ene, as shown in the Japanese patent, from the Veheyden et al disclosure for their known antiviral property for treating applicants' particular retrovirus is obvious to a person of ordinary skill in the art having the above references before him in the absence of unexpected results obtained from treatment of applicants' particular retrovirus. The selection of particular proportions of drug concentration and forms of medicament are within the purview of the skilled artisan.

The Schaeffer et al patent is cited to show the state of art.

The Shen et al patent discloses closely analogous nucleosides, which are useful as antimicrobal agents. This reference is cited to show the state of art.

Any inquiry concerning this communication should be directed to Tou at telephone number 703-557-1205.

Johnnie R. Brown

J. R. BROWN
SUPERVISORY PATENT EXAMINER
ART UNIT 123

J.T.
Tou:koc
6/30/87